

## **Cancer research grant scheme 2023**

### **Guidance for applicants**

#### **Introduction**

Our vision is for everyone served by the Royal Free London NHS Foundation Trust (RFL) to have access to world-leading healthcare, delivered by a thriving workforce and driven by medical research that has a global impact. We support the 10,000 staff of the RFL and their 1.6 million patients across Barnet, Chase Farm and Royal Free hospitals and more than 30 NHS services.

Through the services we provide, and the programmes and equipment we fund, we make a profound and immediate difference to patients' experiences of care. Our volunteering, support hub, and complementary therapy teams enhance the hospital journey for all patients – whether they live locally or come from further away to access the trust's specialist services.

Our support of the RFL workforce enables staff to perform at their very best. Spanning individual professional development and training through to organisation-wide interventions, our initiatives bolster employee resilience and mental health so staff can achieve the best outcomes for patients. We fund ground-breaking research with the potential to change people's lives, whether it's through our grants programme or delivering major capital funding appeals. We also support early career researchers through our PhD funding programme.

#### **Remit of the scheme**

This scheme will support research projects up to £200,000 and for up to 3 years. The projects should align with the trust's [clinical R&D strategy](#) and to one of the four themes in the [NHS Long Term Plan](#) for cancer. Broadly, these are: 1) Prevention awareness and screening; 2) Diagnosis; 3) Treatment; 4) Personalised care.

Project grants will provide support for clearly defined research applications that are innovative and can demonstrate a translational route towards new or improved approaches to prevention, diagnosis, treatment or personalised care.

Projects should aim to address key questions in the cancer field. This can include any relevant basic biological research that can help inform future preclinical and clinical studies, biomarker research including diagnostic and predictive biomarkers, and preclinical studies that generate biological data to underpin therapeutic and diagnostic development. Laboratory-based research projects using samples collected as part of a clinical trial are also eligible.

Applications for research on rare cancers must be able to demonstrate significant potential benefit and/or the applicability or translational potential to other cancers.

Where relevant and given the diverse communities RFL serves, applications must demonstrate consideration of the appropriateness of diversity and inclusion that are relevant to the research aims.

## Application assessment

Applications will be externally peer-reviewed and assessed by the Royal Free Charity Research Review Panel. Applicants will be given the opportunity to respond to the peer review comments.

Applications will be assessed against the following criteria:

- Alignment with strategic priorities – NHS long-term plan and RFL clinical R&D strategy
- Importance – the research need
- Research design and methodology – sound methodological approaches
- Feasibility – background and underpinning research demonstrated, realistic objectives delivered within the timescale and budget, risks identified and mitigated
- Scale of impact for patients – potential to deliver the stated outcomes and its significance for patients
- Value for money – reasonable and justifiable costs and matched support identified (if relevant)

## Eligibility

The lead applicant will need to be employed by one of these organisations:

- Royal Free London NHS Foundation Trust
- Faculty of Medical Sciences, University College London

If a fellowship is funding the lead applicant's salary, the lead applicant must have a co-applicant employed by one of the two organisations above. All lead applicants must be based at one of the two organisations above for the duration of the grant and the research must be primarily undertaken at the above organisations. Should the lead applicant move to another organisation during the grant period, the grant will not be portable and a new grantholder will need to be appointed with the approval of the charity.

Co-applicants and collaborators can be based outside of the two organisations above provided a justification is provided outlining their expertise.

## How to apply

Applications must be received by **4:00pm on 4 April 2023**. Applications submitted after this time will not be accepted. Applications must be sent to [grants@royalfreecharity.org](mailto:grants@royalfreecharity.org). You must allow sufficient time to get the necessary approvals prior to submission.

If you have any queries about the application or anything related to this scheme, please email [grants@royalfreecharity.org](mailto:grants@royalfreecharity.org).

## Application form

### Section 1: Application details

#### Lead applicant

The person with overall responsibility for the management of the grant and the primary contact even if the intellectual leadership and input is shared amongst the research team. The lead applicant will sign the award letter and ensure the grant terms and conditions are adhered to. The lead applicant will also be responsible for reporting to the charity.

#### Project title

The title should be descriptive while accurately reflecting the project.

#### Start date

The start date should be within three months of the notification of outcome. The date should be realistic to allow enough time for recruitment and any necessary approvals. The start date can be changed if your application is successful, within reason.

#### End date

Projects are for up to three years.

#### Research location

Indicate the location of the research. Tick all that apply. Tick 'Other' as well if some of the research will be undertaken by a co-applicant or collaborator who is not based at RFL or UCL.

#### Which organisation will administer this award?

This should be RFL or UCL and will be responsible for signing the grant terms and conditions, and providing the charity with invoices.

Please note, the administering organisation will normally be the same as the organisation sponsoring any associated study, unless other specific arrangements have been agreed.

## **Total amount requested**

This will be in GBP and should match the total breakdown of costs in the finance section of the application.

## **Is your application associated with a clinical study?**

Indicate if your application is associated with a clinical study. If it is, state the name of the trial and its EudraCT/ISRCTN number.

## **Co-applicants/collaborator names**

List all the co-applicants and collaborators that will be actively involved with the project.

Co-applicants will have had intellectual input into the design of the research project and application, and are expected to be involved in the project, for example oversight of elements of the research and management/leadership of the research.

Collaborators named in the application for a specific reason. This can include providing specific expertise, materials, reagents, access to patients or specialised equipment. Collaborators are not generally involved in the day-to-day work of the project and are not employed on the grant. Collaborators must provide letters of support which must be included with the application.

## **Section 2: Strategic alignment**

You should outline how the application complements or aligns with the [RFL R&D strategy](#). You should also reference alignment with the four RFL governing objectives, which are: excellent health outcomes, outstanding experience of care, outstanding experience of our people, be a sustainable organisation. The RFL governing objectives are included in the 2022-27 Strategy Slide Deck.

You must also demonstrate how your application aligns with one or more of the themes in the [NHS Long Term Plan](#) for cancer. Broadly, these are these are: 1) Prevention awareness and screening; 2) Diagnosis; 3) Treatment; 4) Personalised care.

## **Section 3: Project details**

This entire section should be completed in scientific and technical language.

### **Scientific abstract**

Provide a scientific abstract of the work that will be carried out during the project. You should briefly include background, aims, methodology and outputs and patient benefit.

Please note that the abstract will be sent to potential reviewers who will then judge whether they will review the application.

### **Background**

Describe the background to the project, the current state of knowledge and the work leading up to this application, including any preliminary data. You should also include why the research is needed referencing any gaps in knowledge.

### **Aims and objectives**

The proposed research should be hypothesis-led and seek to answer a specific question(s).

### **Project plan**

Describe the experimental and methodological approaches including how they relate to the aims of the project. Include the analyses you will use. You should reference published data and where necessary, any pre-prints or unpublished data.

### **Expected outputs and outcomes**

Describe the anticipated outputs and outcomes, and their significance.

### **Impact**

Describe what impact the outputs and outcomes will have from this grant. In addition to the potential patient benefit, this can also include academic impact, such as advancing knowledge and understanding.

### **Risk and mitigation strategies**

Outline any key risks to delivering the research, and what steps will be put in place to help mitigate or resolve them.

### **References**

Include the references to the research outlined in this application. Full author citations must be included.

## Section 4: Lay project details

This section should be completed in plain English using non-technical language avoiding scientific and technical jargon and abbreviations (unless they have been explained). This section should be accessible by non-scientists and the public. We may ask you to re-write parts of this section if it is not. Furthermore, if your application is successful, our fundraising and communications teams may use some or all of the lay section, both to get a better understanding of the research and in communicating the research to others, such as our supporters and donors.

NIHR have developed an informative guide on how to write plain English lay summaries: [plain English summaries](#). Further information and guides are also provided by the [Plain English Campaign](#).

### Lay summary sentence

Describe your project in one or two sentences that sums up the project.

### Lay summary

The proposed research should be hypothesis-led and seek to answer a specific question(s). Please do not include any confidential information as this abstract may be published on the Royal Free Charity's website. You should refer to the guides above on plain English summaries.

### Background

Outline what the background is to this application and the work leading up to this application. Is it a continuation of your existing research?

### Wider research landscape

How does this piece of research complement the wider relevant research landscape?

### Research programme

How will this grant complement your wider research programme?

### Research need

Why is this research needed? Is there a gap that this research aims to address?

### Aims and Objectives

What are the aims and objectives?

### Patient and public involvement

Patient and public involvement (PPI) in research helps ensure that research is focused on outcomes that are important to patients and people with lived

experience. It also makes the research more relevant by helping to identify and prioritise wider research questions that researchers may not have considered<sup>1</sup>.

PPI in research is defined as research being carried out 'with' or 'by' members of the public rather than 'to', 'about' or 'for' them<sup>2</sup>. PPI does not refer to the recruitment of patients or the public in a clinical trial. Involvement is different to participation and engagement. Involvement, participation and engagement are defined as:

1. *Involvement* is patients and the public being actively involved in research. This can include being co-applicants on research applications and projects, helping with the design of research projects, helping to set research priorities or questions, and as a member(s) of a project advisory group.
2. *Participation* refers to patients and the public participating in a study. This includes recruitment into a clinical trial, being part of a focus group in a research project, and completing questionnaires or surveys as part of a research project.
3. *Engagement* is where information and knowledge about research is shared. This can include at science events that are open to the public, open days at research organisations where the public can find out about the research, raising awareness of research through the media and social media, and dissemination of research findings to participants and the public.

Further resources are available from NIHR INVOLVE on [how to involve patients and the public in research](#) and in the [research cycle](#). NIHR has also published [briefing notes](#) for researchers who are new to PPI or have limited experience.

With lab-based research, it can seem more of a challenge to involve meaningful PPI in the design of the research and the research itself than clinical research. Parkinson's UK, Alzheimer's Society and the NIHR UCLH Biomedical Research Centre have produced a [practical guide](#) to patient and public involvement in lab-based research which contains information on before involving patients and planning PPI.

For this question of the application form, you should consider and outline:

- Whether you consulted patients and/or people with lived experience in your application?
- How have they been involved in the design of the research project?
- If the research project is funded, how will they continue to be involved?

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<sup>1</sup> NIHR briefing notes for researchers. April 2021. Briefing note three: why involve members of the public in research? <https://www.nihr.ac.uk/documents/briefing-notes-for-researchers-public-involvement-in-nhs-health-and-social-care-research/27371#briefing-note-three-why-involve-members-of-the-public-in-research>

<sup>2</sup> NIHR INVOLVE. What is public involvement in research? <https://www.invo.org.uk/find-out-more/what-is-public-involvement-in-research-2/>

## **Impact**

What impact will this project have for patients? If successful, when will the benefits of your research reach patients?

## **Reducing inequalities**

How will this project lead to improving cancer health inequalities and outcomes? You should outline how this research will contribute to reducing cancer health inequalities.

## **Future studies**

If the research is successful, what are the next steps after this research project? What further research will be needed to take forward your research findings?

## **Section 5. Further information**

### **Ethics and regulatory approval**

Research involving human participants, tissue or data requires ethical approval. You can check on the Health Research Authority [website](#) whether your research requires approval.

The research should not start before the necessary approvals are in place. Ethical approval does not need to be in place when applying for a grant. Once approval has been secured, the letter from the Research Ethics Committee must be sent to the charity.

If approval is already in place for the research, include the final letter as an attachment when you submit your application.

### **Research involving animals**

The Royal Free Charity supports the Association of Medical Research Charities (AMRC) [position statement](#) on the use of animals in research and is committed to the principles of the 3Rs – reduction, replacement and refinement – of animal use in research.

In this section of the application form and if you are using animals in the research, you must provide sufficient detail and a justification to help the peer reviewers and Research Review Panel come to an informed opinion on the use of animals in your project. We also require this information for AMRC reporting purposes.

The charity expects that applicants give appropriate consideration to the 3Rs when designing experiments involving animals. The National Centre for the Replacement, Refinement and Reduction of Animals in Research ([NC3Rs](#)) has information and resources on the 3Rs. Researchers can also access the NC3Rs [Experimental Design](#)

[Assistant](#) (EDA) which is a free resource to help researchers design robust experiments more likely to yield reliable and reproducible results. The EDA can also help with statistical analysis methods, support for randomisation and blinding, and sample size calculations.

The [ARRIVE guidelines](#) (Animal Research: Reporting of *In Vivo* Experiments) are a checklist of information to include in publications when describing animal research. Applicants should consider following the guidelines when designing their experiments to ensure enough detail is reported to add to the knowledge base which will help with reproducibility and review.

For cancer research, studies can be associated with a high degree of animal suffering as a result of tumour growth<sup>3</sup>. Consideration should be given to the Workman guidelines for the welfare and use of animals in cancer research<sup>4</sup>.

## **Intellectual Property (IP)**

You should provide information on the IP potential of your project and if there is any existing IP associated with your project.

We consider IP to be defined as patents, copyright, trademarks, trade names, service marks, domain names copyrights, moral rights, rights in and to databases (including rights to prevent the extraction or reutilisation of information from a database), design rights, topography rights and all rights or forms of protection of a similar nature or having equivalent or the similar effect to any of them which may subsist anywhere in the world, whether or not any of them are registered and including applications for registration of any of them.

## **Environmental sustainability**

Research laboratories can consume significant amounts of energy. A typical laboratory uses 5 to 10 times more energy per metre squared than office buildings<sup>5</sup> with ultra-low temperature freezers being among the most energy consuming pieces of equipment<sup>6</sup>.

Describe how you have considered the environmental impact of your research project and the measures, if any, in place to reduce the impact on the environment.

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<sup>3</sup> NC3Rs. Revision of the guidelines on animal use and welfare in cancer research. <https://www.nc3rs.org.uk/our-portfolio/revision-guidelines-animal-use-and-welfare-cancer-research>

<sup>4</sup> Workman, P., Aboagye, E., Balkwill, F. et al. Guidelines for the welfare and use of animals in cancer research. *Br J Cancer* 102, 1555–1577 (2010). <https://doi.org/10.1038/sj.bjc.6605642>

<sup>5</sup> Connections between laboratory research and climate change: what scientists and policy makers can do to reduce environmental impacts. <https://doi.org/10.1002/1873-3468.13932>

<sup>6</sup> Ultra-Low Temperature Freezers: Opening the Door to Energy Savings in Laboratories. <https://www.etcc-ca.com/reports/ultra-low-temperature-freezers-opening-door-energy-savings-laboratories?dl=1587500130>

This can include alignment with your institution's relevant policies. You should also consider:

- The impact of travelling to meetings or conferences and whether this is essential
- How will you reduce consumable and plastic wastage? Examples include using glass instead of plastic, recycling instead of using disposal single use items, creating your own reagents instead of purchasing them
- How will research team members contribute to sustainability?
- Where equipment is being purchased as part of the grant, consideration should be given to the environmental impact

Sustainable UCL has developed the Laboratory Efficiency Assessment Framework ([LEAF](#)), which is a standard for sustainable laboratory operations. The LEAF website has useful resources on how research laboratories can mitigate their environmental impact.

Please note that if two applications are judged to be equal by the Research Review Panel, further weight will be given to the answer to this question.

## Section 6. Finances

Provide a breakdown of the costs requested in this application under each heading, if applicable. The Royal Free Charity will only fund directly incurred costs. Please ensure that the breakdown matches the total requested on Page 1 of the application form.

For any RFL costs, the lead applicant must provide full costings by RFL R&D.

For any UCL costs, the lead applicant must provide the costings as calculated via Worktribe.

### Finance costs

In-line with being an introductory AMRC member, the funding available will only support directly incurred costs and not directly allocated or indirect costs. These include:

#### 1. Directly incurred costs (permitted costs)

The direct costs of research include:

- Research staff (e.g. junior postdoctoral researchers and research assistant salaries)
- Consumables and other costs directly attributable to the project
- Cost of equipment specific to the needs of the project
- Access fees for specialist equipment
- Animal costs

- Publication fees
- Conference travel and registration

## 2. Directly allocated costs (not eligible for funding)

These are shared costs based on estimates and do not represent actual costs on a project-by-project basis. They may include:

- Research investigators: the proportion of time spent by senior researchers such as the principal investigator and co-investigators on a research project
- The cost of shared resources such as clerical and administrative staff, nurses, lab technicians, supervisors and collaborators who are already employed. Equipment not specific to the research
- Estates: the space used by researchers

## 3. Indirect costs (not eligible for funding)

These costs are necessary for underpinning research but cannot be allocated to individual projects. They usually cover computing and information support, central services, general maintenance, lighting, heating and other infrastructure costs

### Research staff

The grant can support full-time or part-time staff. PhD students are not normally permitted to be members of staff on the grant. Eligible staff include junior postdoctoral researchers, research assistants and technicians.

If a fellowship is funding the lead applicant's salary, the lead applicant must have a co-applicant employed by one of the two organisations. All lead applicants must be based at one of the two organisations for the duration of the grant and the research must be primarily undertaken at RFL and/or UCL.

The grant must not be used to offset the salary of any applicant whose salary is supported by external funding such as a fellowship or grant.

Non-tenured researchers (such as postdoctoral researchers) can apply as lead applicants and include their salaries for the duration of the project and must have a co-applicant employed by one of the two organisations.

Salaries are expected to be costed by the host organisation's research office according to an applicable pay model. Add the following figures to each box in the salary section: Basic Salary, National Insurance, Superannuation, London allowance.

If a particular expertise is needed for the project such as statistical expertise or technicians skilled in specific techniques, you may include a cost for a proportion of their time specifically for the work required as long as a justification is provided.

## Consumables

All research consumables and expenses that are necessary for the project should be listed. These should be directly attributable to the project. Any costs for access to specialist equipment should be broken down to per hour and number of hours. We assume that there is a basic level of equipment and computers in research laboratories. Equipment can be included and for any equipment over £5,000, a quote must be included with the application. Costs for a computer and software can be included provided there is a strong justification and they are essential for the research. Computer costs are capped at £1,000.

## Animal costs

If the project involves using animals, you must provide adequate details on the number, species, strain and maintenance/associated costs of the animals to be used.

## Travel

Travel to conferences to present data that is a direct result of the grant is allowed for staff employed on the grant. Costs include accommodation, standard class travel and conference registration. The total cost should be up to £3,000.

## Publications

Publication fees can be included in the application. We strongly encourage researchers to make their publications open access and freely available either immediately upon publication or after six months.

## Patient and public involvement

List any involvement costs and payments to patients or the public that are directly attributable to the research. NIHR provides [guidance](#) on how to cost these activities.

## Ineligible costs

These costs include:

- Costs relating to staff recruitment
- PhD studentship fees
- Personal license fees and a Home Office license
- Funding to provide maintenance and/or insurance of equipment
- Office stationery costs unless required for the project and a justification provided
- Indemnity insurance
- Training courses (including Home Office animal license courses)

## **Justification of costs**

Provide a detailed justification for the costs requested in this application, clearly outlining how these relate to the objectives and proposed timescales. The justification should be sufficiently detailed to allow the reviewers, panel and charity to have an informed opinion on the need of the costs requested.

## **Additional funding and support**

Provide details if this application or a very similar application has been submitted to another funder(s) and when the outcome will be known.

If this application is associated with any matched funding to another funder or other source, provide details including whether the funding has been granted or an application has been submitted. You should also outline how the matched funding complements this application.

You should also include any support your host institution is providing and whether you can access a special purpose fund that will support your application.

If the research project is successful, outline any planned applications to other funders.

## **Section 7. Applicant details**

### **Lead applicant**

Input how much time you spend on research generally and the time you will spend on this project in hours per week.

List your present and last employment position. Include any further positions that you think are relevant to the application.

List all your current grants and any other closed grants that you think are relevant to the application.

List your most important research publications that are relevant to the application and any others you think would aid your application.

### **Co-applicants**

Co-applicants will have had intellectual input into the design of the research project and application, and are expected to be involved in the project, for example oversight of elements of the research and management/leadership of the research.

Input how much time the co-applicants spend on research generally and the time they will spend on this project in hours per week.

List all current grants and any other closed grants that are relevant to the application.

List the most important research publications that are relevant to the application.

## **Collaborator(s)**

Collaborators named in the application for a specific reason. This can include provide specific expertise, materials, reagents, access to patients or specialised equipment. Collaborators are not generally involved in the day-to-day work of the project and are not employed on the grant.

All collaborators must provide a letter of support outlining what support will be provided for the project.

## **Section 8. Peer reviewer suggestions**

This information will be treated confidentially. You may wish to include the names of up to three peer reviewers who we may or may not contact to review your application. You must not have any conflicts of interest with your suggested reviewers. These include they must not be from the Royal Free London NHS Foundation Trust or UCL and you must not have published or collaborated with them in the last three years. Please provide their names and contact details.

You can also include names of people who you do not want to review your application.

## **Section 9. Attachments**

You must attach a Gantt chart to your application which shows how long work packages will take to be delivered and when.

The following must also be attached to this application only if they are relevant:

- For UCL submitted applications, a Worktribe costs spreadsheet, unless provided in the Finance table
- Collaborator(s) letter of support
- Other letters of support, such as host institution
- Ethical approval letter(s)
- Animal Welfare and Ethical Review Body approval
- Quotes for equipment greater than £5,000

## Section 11. Submitting your application

You must ensure you have all the necessary approvals and sign-offs before you submit your application. The completed application including approvals and sign-offs must be submitted by **4:00pm on 4 April 2023**. Any applications received after 4:00pm will not be accepted.

Applications must be sent to [grants@royalfreecharity.org](mailto:grants@royalfreecharity.org). You will receive confirmation of receipt of your application.